

Application No. 10/620,485
Amendment dated June 20, 2005
Response to Office Action of March 25, 2005

Atty. Docket No. 6097P033
Examiner Kershteyn, Igor
TC/A.U. 3745

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A wind turbine comprising:

one or more proximity sensors facing a shaft to detect radial displacement of [[a]] the shaft from a predetermined positions with respect to a relatively non-deflecting component; and

a control circuit coupled with the one or more sensors to mitigate load causing the deflection on the one or more components in response to signals from the one or more sensors.
2. (Original) The wind turbine of claim 1 wherein the control circuits mitigates bending loads on the shaft by controlling pitch of one or more wind turbine blades.
3. (Original) The wind turbine of claim 1 wherein the one or more components comprise a main shaft of the wind turbine.
4. (Canceled)

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5. (Currently Amended) The wind turbine of claim 1 ~~[[4]]~~ wherein the set of sensors comprises two proximity sensors facing the shaft, and further wherein the two sensors are approximately 90° apart with respect to the axis of the shaft.

6. (Currently Amended) The wind turbine of claim 1 ~~[[4]]~~ wherein the set of sensors comprises four proximity sensors facing the shaft, and further wherein the four sensors are approximately 90° apart with respect to the axis of the shaft.

7. (Currently Amended) The wind turbine of claim 1 ~~[[4]]~~ wherein the set of sensors comprises two pairs of proximity sensors facing the shaft, and further wherein the two pairs of sensors are approximately 90° apart with respect to the axis of the shaft.

8. (Currently Amended) A wind turbine comprising:
means for detecting radial displacement of a shaft of the wind turbine based on output signals from one or more proximity sensors; and
means for mitigating a load causing the displacement of the shaft in response to the ~~measurement of the~~ detected shaft displacement.

9. (Original) The wind turbine of claim 8 wherein the means for mitigating the load comprises means for controlling pitch of one or more blades.

10. (Original) The wind turbine of claim 8 wherein the shaft comprises a main shaft.

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11. (Currently Amended) A method comprising:
receiving signals from one or more proximity sensors facing a shaft indicating
radial displacement of [[a]] the shaft of a wind turbine;
determining a load placed on the wind turbine based on the signals from the one
or more sensors; and
causing one or more blades of the wind turbine to change pitch based on the
determined load.
12. (Original) The method of claim 11 wherein the shaft comprises a main
shaft.
13. (Original) The method of claim 11 wherein the one or more sensors detect
radial displacement of the shaft from an at rest position.
14. (Canceled)
15. (Currently Amended) The method of claim 11 [[14]] wherein the set of
sensors comprises two proximity sensors facing the shaft, and further wherein the two
sensors are approximately 90° apart with respect to the axis of the shaft.

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16. (Currently Amended) The method of claim 11 ~~[[14]]~~ wherein the set of sensors comprises four proximity sensors facing the shaft, and further wherein the four sensors are approximately 90° apart with respect to the axis of the shaft.

17. (Currently Amended) The method of claim 11 ~~[[14]]~~ wherein the set of sensors comprises two pairs of proximity sensors facing the shaft, and further wherein the two pairs of sensors are approximately 90° apart with respect to the axis of the shaft.

18. (Currently Amended) An article comprising an electronically-readable medium having stored thereon instructions that, when executed, cause one or more processors to:

receive signals from one or more proximity sensors connected to a shaft
indicating radial displacement of ~~[[a]]~~ the shaft of a wind turbine;

determine a load placed on the wind turbine based on the signals from the one or more sensors; and

cause one or more blades of the wind turbine to change pitch based on the determined load.

19. (Original) The article of claim 18 wherein the shaft comprises a main shaft.

20. (Original) The article of claim 18 wherein the one or more sensors detect radial displacement of the shaft from an at rest position.

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21. (Canceled)

22. (Currently Amended) The article of claim 18 ~~[[21]]~~ wherein the set of sensors comprises two proximity sensors facing the shaft, and further wherein the two sensors are approximately 90° apart with respect to the axis of the shaft.

23. (Currently Amended) The article of claim 18 ~~[[21]]~~ wherein the set of sensors comprises four proximity sensors facing the shaft, and further wherein the four sensors are approximately 90° apart with respect to the axis of the shaft.

24. (Currently Amended) The article of claim 18 ~~[[21]]~~ wherein the set of sensors comprises two pairs of proximity sensors facing the shaft, and further wherein the two pairs of sensors are approximately 90° apart with respect to the axis of the shaft.